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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/271,617	03/17/1999	ADAM J. CHEYER	SRI1P021	4388

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EXAMINER

BULLOCK JR, LEWIS ALEXANDER

ART UNIT PAPER NUMBER

2151

DATE MAILED: 09/30/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/271,617

Applicant(s)

CHEYER ET AL.

Examiner

Lewis A. Bullock, Jr.

Art Unit

2151

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10,12,14-21,23,25-28 and 37-42 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 1-10,12,14-21,23,25-28 and 37-42 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5,6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. New corrected drawings are required in this application because of Draftperson's Review. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The abstract of the disclosure is objected to because it exceeds 150 words.

Correction is required. See MPEP § 608.01(b).

Claim Objections

4. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 34 and 35 (second set) and 37-40 have been renumbered 37-42.

Claim Rejections - 35 USC § 112

5. Claims 37 and 38 recite the limitation "as set forth in claim 29" in line 1. There is insufficient antecedent basis for this limitation in the claim. These claims are further examined to be dependent on claim 40. Applicant is also requested to amend the dependency of claims 14, 15, 16, 17, and 23 to depend upon claim 39, not 37 and claims 25, 41, 37, and 38 to depend upon claim 40, not 38 to conform to the renumbering of the claims.

--Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-10, 12, 14-21, 23, 25-28, and 37-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over FURUSAWA (US 6,338,081) in view of "Information Brokering in an Agent Architecture" by MARTIN.

As to claim 1, FURUSAWA teaches a computer-implemented method for communication and cooperative task completion between a community of distributed electronic agents and at least one other distributed component system, the other distributed component system including a component registry (broker advertise table) providing access to a plurality of distributed components (agents) registered therein, the method comprising the acts of: receiving from a bridge (broker agent) a description of functional capabilities of the components registered in the component registry (register with the facilitator agent), the bridge agent being capable of translating between a dynamically expandable inter-agent communication language understood by the community of distributed electronic agents (ACL) and an incompatible protocol understood by the distributed component system; and adding to a facilitator registry (facilitator advertise table) of the community of distributed agents, in ICL format, a declaration of functional capabilities corresponding to the components registered in the component registry, on behalf of the bridge agent (register with the facilitator agent); (col. 13, lines 17-col. 14, line 47; col. 14, line 60-64; col. 5, lines 46-65; col. 3, lines 1-15); responsive to an ICL request for service, delegating the request to the bridge agent; translating the delegated ICL request into the incompatible protocol; invoking one or more of the distributed components via the component registry and the translated

request in the incompatible protocol (col. 15, lines 10-41; col. 5, lines 41-65). However, FURUSAWA does not teach that the request is an ICL sub-goal request.

MARTIN teaches the Broker agent delegates, translates, and relays the appropriate subqueries to the available source agents and then accepts the results and reintegrates them for return to the requester wherein each query that is translated to sub-queries is the same as a Prolog goal (pg. 7-8). It would be obvious that when the query is translated that its sub-queries are sub-goals. Therefore, it would be obvious to combine the teachings of FURUSAWA with the teachings of MARTIN in order to facilitate transparent access to a collection of information sources (pg. 8).

As to claim 2, FURUSAWA teaches the service request is generated by one of the components registered in the multiple component registry (message packet sent to the broker agent by the regular agent); and the steps of transmitting the service request to the bridge agent and translating the service request into the ICL (col. 5, lines 46-65; col. 15, lines 10-40).

As to claim 3, MARTIN teaches the service request is received from an agent capable of communicating in the ICL (pg. 8, "3rd paragraph).

As to claim 4, MARTIN teaches the agent (helper agent) is independent of the multiple component registry (figure 1).

As to claim 5, FURUSAWA teaches receiving functional capabilities of one or more of the distributed electronic agents; and adding the agent functional capabilities to the facilitator registry (col. 12, lines 53-63). MARTIN teaches the step of determining a second ICL sub-query necessary to accomplish the ICL request for service; selecting from the facilitator registry an agent capable of completing the second ICL sub-query; and delegating the second ICL sub-query to the selected electronic agent (pg. 7, System Architecture). It would be obvious that the facilitator performs the functionality since the broker is part of the facilitator.

As to claims 6-10, MARTIN teaches the components registered in the component registry can be software-based objects (source agents) (pg. 13). Therefore it would be obvious that the registry is an object service since the objects invoke it. "Official Notice" is taken that JINI, CORBA, and Java are well known object oriented software and therefore obvious that the registry is constructed as such.

As to claim 12, FURUSAWA teaches service provider agents upon installation register with the facilitator advertise table (facilitator registry) (col. 12, lines 53-63). It would be obvious that since agents upon entering the system register with the facilitator registry that the table is periodically updated.

As to claims 39, 14-21, and 23 reference is made to a computer readable medium which corresponds to the method of claims 1-3, 5-10, and 12 and is therefore met by the rejection of claims 1-3, 5-10, and 12 above.

As to claims 40 and 25-28, reference is made to a computer architecture, which corresponds to the method of claims 1 and 7-10 and is therefore met by the rejection of claims 1 and 7-10 above.

As to claim 37, MARTIN teaches an electronic agent (helper agent), the electronic agent being independent of the multiple component registry, and wherein the electronic service requesting agent generates the service request in the ICL (pg. 7, figure 1).

As to claim 38, MARTIN teaches an electronic service providing agent (source agents) capable of communicating in the ICL and the registry compiled in the ICL includes the functional capabilities of the service providing agent, and the facilitator is operable to delegate the goal to the service providing agent in the ICL (pg. 7-8, figure 1).

As to claim 41, MARTIN teaches the bridge agent is integral with the facilitator (pg. 7, figure 1).


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lewis A. Bullock, Jr. whose telephone number is (703) 305-0439. The examiner can normally be reached on Monday-Friday, 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alvin E. Oberley can be reached on (703) 305-9716. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-0286.

lab
September 25, 2002


ALVIN OBERLEY
SUPERVISORY PATENT EXAMINER
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